Patent Application of

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for

MULTIPURPOSE CARRYING SYSTEM

The present application is a continuation-in-part of U.S. patent application 09/794,071 filed 02/28/2001 and now abandoned, which was a continuation-in-part application of 08/361,854, filed December 21, 1994, and now abandoned which was a continuation-in-part application of US. Patent application 08/138,009, filed October 19,1993, and now abandoned, and which was a continuation-in-part of US. Patent application 07/913,426, filed July 15, 1992 and now abandoned. The entire contents of all of which are hereby incorporated by reference in their entirety.

Field of the Invention

This invention relates to hands-free shoulder carriers.

Background of the Invention

In the field of shoulder straps and body harnesses most of these devices include the same parts of inventions of the prior art (straps, shoulder pads, connectors, cross-pieces, hook and loop fasteners, and similar). However, the parts are differently mounted, to obtain a comfortable apparatus for carrying specific gear (tools, photo-gear, musical instruments and like). Therefore, for carrying specific different items a user is obliged to buy a plurality of apparatuses, as said shoulder straps are generally a part of a gear container or of a tool.

Although this is a crowded art, even a small change can be significant. Principal changes, which make the apparatuses different, are substantially the features of hooks, straps, systems for length adjusting, and padding. The apparatuses can be divided in three groups:

A) apparatuses which use shoulder straps having a constant width from shoulder to load, better indicated as "shoulder belts", B) apparatuses which use shoulder straps being wider on the shoulder and narrower in correspondence to the load, and C) apparatuses which go around the neck.

The apparatus of group A) generally may be: 1) very encumbering if wide enough to avoid injury for the shoulder or 2) very injurious if so narrow so as to be light and foldable.

The apparatuses of group B) generally are very heavy and encumbering, because the major width in correspondence with a shoulder is obtained by fixed or slid able semi-rigid padding located under a narrower shoulder strap. The apparatuses of group C) soon tire the neck, and can be used only for slight loads and for a short time.

Often an apparatus differs from others only in the "carrying means." Generally, the carrying means are only a particular type of hook which works better with a specific gear, and this little difference is often enough to be novel. In effect, it is this important part which permits a user to carry a piece of furniture and not photo-gear. This important part also causes the differences between the straps or cables that must support them. For example, one cannot locate a hook for carrying furniture on a strap for photo gear.

Therefore, all shoulder carriers of the prior art have the limitations that they are good only for the kind of objects to be carried.

Further, shoulder carriers of the prior art are to be considered 1) part of the object to be carried or 2) a work tool.

Therefore, no attention has been given to the carrying of the carrier, 1) when it is left attached to the object to carry, or 2) when the carrier is kept with work tools. The carrier is not nice to see and has heavy encumbering hooks. Neither case provides a carrier which can be stored in a pocket-spaced little pouch, within reach at every moment, nor at the same time having very wide shoulder straps.

For this reason many persons who suddenly need to carry things are obliged to tire their hands and arms.

Further, there are some objects for which a satisfying carrier has not been found. For this reason women making purchases and food-shopping, have their hands filled with bags, sacks, boxes, such that they cannot hold their children's hand, and it is difficult to open doors or use an umbrella when raining.

Further, on a bicycle or motorcycle one often sees bags hung on handlebars, and so on. The apparatuses of the prior art do not remedy these

problems, nor are they transportable in a pocket-spaced little pouch, nor are they capable of quickly changing their features, for example from shopper transportation or to big box transporting.

Examples of carrying apparatuses can be found in prior art Patents U.S. 1,879,480 (J.A. Pures) September 27, 1932; U.S. 190,880 (Hodges) January 4, 1923; U.S. 4,091,974 (McClintock) May 30, 1978; U.S. 2,247,867 (Baumann) July 1, 1941; U.S. 4,378,921 (Allen et al) April 5, 1983; U.S. 4,446,997 (Himberg) May 8, 1984; SW 391,507 (Horak) August 31, 1906; U.S. 4,416,405 (Caillouet) November 22, 1983; U.S. 4,440,334 (Kappel) April 3, 1984; CH 667,935 (Zappatini) November 15, 1988; U.S. 4,291,822 (Simonds) September 29,1981; U.S. 2,247,835 (Gassert et al) July 1, 1941; DE A 3,443,828 (Roth) November 30, 1984; U.S 4,768,689 (Davis) September 6, 1988; U.S. 4,033,488 (Brewer) July 5, 1977; U.S. 4,962,873 (Schattel) October 16,1990; U.S. 4,785,984 (Seitz-Gangemi) November22, 1988; DE G 8909078 (Doring) November 11, 1989; CA AI 17019 (M. Miller) September 25, 1984; U.S. 5,165,584 (Meaghere et al) November24, 1992; GB A Ko4881 (L.M. Shaffner) November 10, 1910; WO A 8501194 (Hammar et al) March 28, 1985; U.S. 1,490,066 (W.J. Carr) April 8,1924; U.S. 4,978,044 (A.L. Silver) December 18, 1990; WO A 9109551 (Camas Corp) July 11, 1991; CH A 610503 (M. Gysin) April30, 1979; GB A 428409 (W.T. Henleys Telegraph Works Co., Ltd.) June 6, 1936; EP A 0229699 (W.L. Heckermann) July 22,1987; WO A 84 00286 (A. Nauta), February 2, 1984; DE A 34 36 920 (A. Kaup) April 10, 1986; U.S. 4,336,899 (C.D. Price, II) June 29, 1982; U.S. 4,804,025 (D.A. Bear) February 14, 1989; U.S. 4,487,347 (M.S. Zegar) December11, 1984; U.S. 2,855,133 (H.E. Mullin) October 7, 1958; U.S. 5,060,998 (P.S. Plillips) October 29, 1991; U.S. 5,008,987 (T.M. Armour, II) April 23, 1991.

To disclose some of prior art apparatuses one can consider Doring's apparatus, (DE-U-8909078) which relates to a carrying strap for suitcase transportation. The apparatus is a typical apparatus of above-cited group A), wherein the width of shoulder strap is constant from shoulder to load, and wherein the shoulder strap is sufficiently long to connect the load to be carried, this means sufficiently long to go from the load to the shoulder and again from the shoulder to the load. This includes in the same object named "shoulder strap", two different zones: shoulder zone and load-connecting zone, which are not separated.

The consequence is that, if the strap 's width is great, this should be comfortable for the shoulder of user, but the strap is large and encumbering.

Vice versa, if the strap is narrow, it should be less encumbering but far less comfortable for the shoulder. The type of strap does not permit connection to specific carrying belts, but only to the load.

Further, because the apparatus has a shoulder padding firmly fixed on the shoulder strap, it is not closely foldable in a little pocket-sized pouch. Further, the apparatus cannot change its features according to the object to be carried.

Some embodiments use a shoulder strap connected to a cable having hooking means. In Roth's apparatus (A-3 443 828, Germ.) there is one cable going from end to end of a shoulder strap and threaded in an encumbering L-shaped hook such as to be specific for furniture transportation. Therefore it is not foldable in a little pouch for the type of load-hook and for the type of connection between strap and cable, and can open when folding. Roth 's apparatus does not permit a connection between the load in two points.

In Baumann's 2,247,867 apparatus there is a collar strap meant to hold a saxophone in a central position, on the user's abdomen.

Objects and Advantages

Accordingly, several objects and advantages of the present invention are:

a) To provide a shoulder carrying system for the carrying of plastic shoppers, cartons, pictures, containers, long objects, and other objects that usually are daily carried by people.

b) To provide a type of a pocket able shoulder carrier having a stabilizing system for avoiding shoulder slipping of the shoulder strap

c) To provide a shoulder carrier for the transportation of objects when using a bicycle or a motorcycle.

Still further, objects and advantages will become apparent from a consideration of the ensuing description.

Summary of the Invention

The invention consists in a new carrying system of objects, based on the use of a hooking shoulder carrier which does not include any container in which to transport objects. This permits the device to hook directly the load and therefore it can be light and pocket able, thus being able to carry even encumbering objects. Further, the dimension of carried objects is not limited by the dimensions of a container. Objects to be carried are hooked in two points.

The base-embodiment of the carrier, is a one-shoulder carrier comprising:

- a shoulder strap, comfortable because very wide, not encumbering because short (such as to stay in the only shoulder zone or a user

- two ring-shaped securing elements, (shall also be indicated as "ring-shaped elements"), each at one end of the shoulder strap;

- two identical thin elongated flexible connector elements (shall also be indicated as "carrying cable-shaped elements" or "carrying cables") each having an element for engaging with the goods to be carried (shall also be indicated as "carrying hook").

With reference to connector elements, each comprises:

- a first end, connected to one of the ring-shaped elements

- a second end connected to a carrying hook that can be of different types

- said carrying hook

To this base-embodiment of the shoulder carrier can be added:

~~- several additional narrow elongated flexible connector elements~~ hook able on each of the ring shaped elements ~~(if it necessary to have a plurality of hooking elements hanging from the shoulder strap)~~

- a lower transversal element F connecting the two carrying hooks; said transversal element can be hand maneuvered by the user, such as to stabilize the carrier and to prevent slipping of shoulder strap from shoulder. Obviously, if necessary, it can also help transportation.

For a maneuver of the load made independent from the maneuver of transversal element F, the carrying hooks can be anchor-shaped.

The most comfortable shape of lower transversal element should be a belt element.

This type of "carrier-without-container" is particularly useful for the transportation of plastic shoppers, but also of any object hook able in two points.

A group of long objects can be tied in two points, which can be then hooked by the carrier.

Used cross-wise it is very helpful in cycle-transportation.

When not in use, it can fit in a pocket, ready for a quantity of carrying necessities.

By matching, by use of upper transversal elements, two of the above indicated embodiments it is possible to obtain double shoulder carriers having the features above indicated.

Brief Description of the Drawings

Fig. 1 shows the base-embodiment of the carrying system.

Fig. 2 ~~shows the embodiment of fig. 1 used cross wise by a user being on a motorcycle.~~ shows a detail of anchor-shaped hook.

~~Fig. 3 shows use of a carrier obtained from the carrier of Fig. 1 when additional carrying cables are provided.~~

Fig. ~~4~~ 3shows a carrier obtained from the carrier of Fig. 1 when additional lower transversal element is provided.

Fig. 4 shows a detail of plastic bag transportation by use of the carrier of fig. 3.

Fig. 5 shows a user carrying a plastic bag by use of the carrier of fig. 3.

~~shows a plastic bag connected to the carrier of fig. 4.~~

Fig. 6 shows a double shoulder carrier obtained by two carriers of fig. 3 connected one to the other by upper transversal elements.

~~shows a carrier obtained from the carrier of Fig. 1 wherein anchor-shaped hooks are provided.~~

Fig. 7 shows an alternatively embodiment of the carrier of Fig. 3 wherein each hook is a normal hook connecting both, the load and the transversal element

~~shows a detail of plastic bag transportation by use of the carrier of fig. 6.~~

~~Fig. 8 shows a detail of anchor shaped hook.~~

~~Fig. 9 shows a user carrying a plastic bag by use of the carrier of fig. 6.~~

~~Fig. 10 shows a double shoulder carrier obtained by two carriers of fig. 1 connected one to the other by upper transversal elements.~~

Reference numerals in Drawings

A carrier base embodiment with anchor-shaped hooks

~~B carrier with additional carrying cables~~

B ~~D~~ carrier with anchor-shaped hooks and transversal element

C ~~E~~ two-shoulder carrier base embodiment

D ~~C~~ carrier with normal hooks and transversal element

F transversal element

~~H carrying cable shaped element with a hook at each end~~

L carrying cable with an anchor-shaped hook at an end

1 strap
2, 2' cable-shaped flexible element
3 end of strap 1
3' end of strap 2
4 ring at end 3 of shoulder strap 1
~~5 carrying cable shaped element with a hook at an end~~
6 first end of cable 2
7 second end of cable 2
8 hook at second end of cable 2
9 handle of plastic shopper 18
~~10 additional carrying cable~~
~~11 hook~~
12 user
~~13 cable shaped element of additional carrying cable H~~
~~14 first end of cable 13~~
~~15 second end of cable 13~~
~~16 hook~~
~~17 strap~~
18 plastic bag
19, 19' ends of ~~element F~~ strap 21
20 ring at end 19 of strap 21
~~21 strap~~
22 anchor-shaped hook
22' anchor-shaped hook
23 transversal strap
~~24 snap hook~~
~~25 snap hook~~
26 common back of snap hooks 24,25
27 ring of anchor-shaped hook 22
~~28 picture~~
~~29 cage~~
~~30 string~~
~~31 string~~

Detailed Description of the Preferred Embodiments

Fig. 1 shows the base-embodiment A of the carrier. It is a one-shoulder carrier comprising:

- a shoulder strap 1 , comfortable because very wide, not encumbering because short (such as to stay in the only shoulder zone or a user 12.
- two ring-shaped elements, 4,4' , each at one end 3,3' of the shoulder strap;
- two identical carrying cable shaped elements ~~5,5'~~ L,L' ~~with a hook 22 at an end~~.

With reference to element ~~5~~, L it comprises:

- an elongated flexible thin element 2 having two ends 6,7:
- a first end 6 , connected to one 4 of the ring-shaped elements
- a second end 7 connected to a carrying anchor shaped hook 22 8,

Fig. 2 shows a carrier B obtained by adding to carrier A lower transversal element F, comprising:

- a central body 21 having two ends 19,19'
- two rings 20,20' connected to said ends 19,19' and removably hooked to carrying hooks 22,22'

Fig. 3 shows a detail of connection between anchor-shaped hooks 22,22' with plastic bag 18 and transversal element F. With reference to hook 22

Fig. 4 shows detail of anchor shaped hook 22 , composed by two adjacent hooks 24,25 having in common the back element 26 and the ring 27. In first of said adjacent hooks can be hooked a handle of plastic bag 18, while in second hook can be independently hooked a ring of transversal element F, as shown in Figs 3,4,5,6

Fig. 5 shows a use of transversal element F which can stabilize the carrier when kept with a hand by user 12 . In this way it is possible to avoid the dangling of the load and also to prevent the slipping of the carrier from the shoulder of user 12 by simply pressing it downwards.

Obviously, element F can be used also for carrying scopes and can be detached when necessary, in case of cross-wise transportation.

Fig. 6 shows how it is possible to connect two carriers B,B' by means of transversal upper elements as 23. A double shoulder carrier C is so obtained.

Fig. 7 shows carrier D carrying a plastic bag 18. In carrier D two normal hooks 8,8' hooks thus a ring of transversal element F, thus the handles 9,9' of plastic bag 18.

~~Fig. 2 Shows carrier A used cross-wise by a user 12 being on a motorcycle and carrying a plastic bag 18 having handles 9,9' connected to the carrier A~~

~~Fig. 3 shows a carrier B obtained by adding to carrier A further additional carrying cables H having a hook 11,11' at each end of cable shaped element 13. It so is possible to carry by the same carrier a plurality of objects, as picture 28 (hooked to its strings 30,31, and cage 29.~~

~~Fig. 4 shows a carrier C obtained by adding to carrier A lower transversal element F, comprising:~~

~~- a central body 21 having two ends 19,19'~~

~~- two rings 20,20' connected to said ends 19,19' and removably hooked to carrying hooks 8,8' of carrier A.~~

~~Fig. 5 shows carrier C carrying a plastic bag 19, Hook 8 hooks thus a ring of transversal element F, thus the handle 9 of plastic bag 18.~~

~~The preferred embodiment is shown in fig.'s 6-9.~~

~~Fig. 6 Shows carrier D, which is a carrier C whose carrying hooks are hook-shaped carrying hooks 22,22'~~

~~Fig. 7 shows a detail of connection between anchor-shaped hooks 22,22' with plastic bag 18 and transversal element F. With reference to hook 22 (fig. 8) one can see that hook 22 is a double hook composed by two adjacent hooks 24,25 having in common the back element 26 and the ring 27. In first of said adjacent hooks can be hooked a handle of plastic bag 18, while in second hook can be independently hooked a ring of transversal element F.~~

~~Fig. 9 shows a use of said transversal element which can stabilize the carrier when kept with a hand by user 12 . In this way it is possible to avoid the dangling of the load and also to prevent the slipping of the carrier from the shoulder of user 12 by simply pressing it downwards.~~

~~Obviously, element F can be use also for carrying scopes and can be detached when necessary, in case of cross wise transportation.~~

~~Fig. 10 shows how it is possible to connect two carriers A,A' by means of transversal upper elements as 23. A double shoulder carrier is so obtained.~~

This carrying system has a great extent of uses, of which the devices described in the figures are only some examples. Accordingly, the scope of the invention should be determined not only by the embodiments illustrated, but by the appended claims and their legal equivalents.